

Table Of Contents:Alternative namesDefinitionHow the test is performedHow to prepare for the testHow the test will feelWhat the risks areWhy the test is performedNormal valuesWhat abnormal results meanCostSpecial considerations**Alternative names:**

cardiac angiography; angiography of the heart; coronary arteriography

Definition:

The study of the arterial blood vessels of the heart by injection of contrast media through a catheter (thin flexible tube) that has been positioned into the aorta or the heart. A rapid succession of X-rays is taken to view blood flow.

How the test is performed:

Coronary angiography is usually performed in conjunction with cardiac catheterization. You are given a mild sedative prior to the test. An intravenous catheter is started in your arm to allow for the administration of medication during the procedure.

A radiologist or cardiologist inserts the catheter through a small incision in a vein in your arm, neck, or groin after cleansing the site and numbing the site with a local anesthetic. The catheter is then carefully threaded into the heart using X-ray images called fluoroscopy to guide the insertion. When the catheter is in place, dye is injected to view the blood vessels within the heart.

How to prepare for the test:

Food and fluid are restricted 6 to 8 hours before the test. The procedure takes place in the hospital. Sometimes, admission the night before the test is required. Otherwise, admission as an outpatient or inpatient the morning of the procedure is required. An explanation of the procedure and its risks is provided by a health care provider. A witnessed, signed consent for the procedure is required. A mild sedative is usually given 1/2 hour before the procedure. The procedure may last from 1 to several hours. You must wear hospital clothing.

Infants and children:

The physical and psychological preparation you can provide for this or any test or procedure depends on your child's age, interests, previous experience, and level of trust. For specific information regarding how you can prepare your child, see the following topics as they correspond to your child's age:

- infant test or procedure preparation (birth to 1 year)
- toddler test or procedure preparation (1 to 3 years)
- preschooler test or procedure preparation (3 to 6 years)
- schoolage test or procedure preparation (6 to 12 years)
- adolescent test or procedure preparation (12 to 18 years)

**How the test will feel:**

The procedure takes place in a radiology department or cardiac diagnostics laboratory. You are given sedation to relax prior to the procedure, but you are awake and able to follow instructions during the test. You will remain on a stretcher for the duration of the test. An incision is made into a vein in your arm, neck, or groin for threading the catheter into the heart. Local anesthesia is given to insert the catheter, so the only sensation is one of pressure at the site. Occasionally, a flushing sensation

occurs after the contrast media is injected. Discomfort may arise from having to remain still for prolonged periods of time.

What the risks are:

Risks of the procedure are cardiac arrhythmias, cardiac tamponade, trauma to the vein or artery, low blood pressure, infection, embolism from blood clots at the tip of the catheter, reaction to contrast medium, hemorrhage, stroke, and heart attack.

Why the test is performed:

Coronary angiography is performed to detect obstruction in the coronary arteries, which can lead to heart attack or myocardial infarction. It may be performed in people with unstable angina, atypical chest pain, aortic stenosis, and unexplained heart failure. There may also be other indications.

Normal values:

Normal blood supply to the heart is normal.

What abnormal results mean:

Depending on the degree of blocked blood flow in the coronary arteries, there is an increased risk for a heart attack.

Additional conditions under which the test may be performed:

- alcoholic cardiomyopathy
- aortic stenosis
- arrhythmias
- atrial fibrillation/flutter
- atrial myxoma; left
- atrial myxoma; right
- atrial septal defect
- cardiac tamponade
- cardiogenic shock
- coarctation of the aorta
- coronary artery spasm
- dilated cardiomyopathy
- ectopic heartbeat
- heart failure
- hypertensive heart disease
- hypertrophic cardiomyopathy
- idiopathic cardiomyopathy
- ischemic cardiomyopathy
- left-sided heart failure
- mitral regurgitation; acute
- mitral regurgitation; chronic
- mitral stenosis
- mitral valve prolapse
- pericarditis
- pericarditis; bacterial
- pericarditis; constrictive
- pericarditis; post-MI
- peripartum cardiomyopathy
- restrictive cardiomyopathy
- senile cardiac amyloid
- stable angina
- SVC obstruction
- unstable angina
- ventricular septal defect

Cost: